

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A soft magnetic material, comprising:

a plurality of composite magnetic particles,

each of said plurality of composite magnetic particles having: a metal magnetic particle including iron; a lower film surrounding a surface of said metal magnetic particle and being formed of an oxide of a nonferrous metal satisfying a composition range where oxygen is less than oxygen of a stoichiometry composition of a compound constituted of an element and oxygen, that constitute the lower film; and an insulating upper film surrounding a surface of said lower film and including oxygen,

wherein said nonferrous metal includes at least one selected from the group consisting of aluminum, chromium, silicon, titanium, vanadium and nickel, and

an absolute value of heat generated when a primary compound is produced by a reaction between oxygen and said at least one selected from the group consisting of aluminum, chromium, silicon, titanium, vanadium and nickel is greater than an absolute value of heat generated when a primary compound is produced by a reaction between iron and oxygen.

2. (Cancelled)

3. (Previously Presented) The soft magnetic material according to claim 1, wherein said lower film has an average thickness of not less than 50 nm and not more than 1 μm .

4. (Previously Presented) The soft magnetic material according to claim 1, wherein said upper film includes at least one selected from the group consisting of a phosphorus compound, a silicon compound, an aluminum compound, a zirconium compound and a titanium compound.

5. (Previously Presented) The soft magnetic material according to claim 1, wherein said upper film has an average thickness of not less than 10 nm and not more than 1 μm .

6. (Original) A dust core fabricated using the soft magnetic material according to claim 1.

7. (Previously Presented) The dust core according to claim 6, further comprising an organic matter disposed between said plurality of composite magnetic particles to join said plurality of composite magnetic particles together and including at least one selected from the group consisting of a polyethylene resin, a silicone resin, a polyamide resin, a polyimide resin, a polyamide imide resin, an epoxy resin, a phenolic resin, an acrylic resin and a polytetrafluoroethylene.

8. (Withdrawn) A method of manufacturing the dust core according to claim 6, comprising the steps of:

by pressure-forming said plurality of composite magnetic particles, forming a molding;
and

heat-treating said molding at a temperature of not less than 500°C.

9. (Currently Amended) A soft magnetic material, comprising:

a plurality of composite magnetic particles,

each of said plurality of composite magnetic particles having: a metal magnetic particle including iron; a lower film surrounding a surface of said metal magnetic particle and being formed of an oxide of a nonferrous metal satisfying a composition range where oxygen is less than oxygen of a stoichiometry composition of a compound constituted of an element and oxygen, that constitute the lower film; and an insulating upper film surrounding a surface of said lower film and including oxygen,

wherein said nonferrous metal includes at least one selected from the group consisting of aluminum, chromium, silicon, titanium, vanadium and nickel, and

said at least one selected from the group consisting of aluminum, chromium, silicon, titanium, vanadium and nickel has a diffusion coefficient with respect to the oxygen included in said upper film that is smaller than such diffusion coefficient of iron.

10. (Cancelled)

11. (Previously Presented) The soft magnetic material according to claim 9, wherein said lower film has an average thickness of not less than 50 nm and not more than 1 μm .

12. (Previously Presented) The soft magnetic material according to claim 9, wherein said upper film includes at least one selected from the group consisting of a phosphorus

compound, a silicon compound, an aluminum compound, a zirconium compound and a titanium compound.

13. (Previously Presented) The soft magnetic material according to claim 9, wherein said upper film has an average thickness of not less than 10 nm and not more than 1 μm .

14. (Original) A dust core fabricated using the soft magnetic material according to claim 9.

15. (Previously Presented) The dust core according to claim 14, further comprising an organic matter disposed between said plurality of composite magnetic particles to join said plurality of composite magnetic particles together and including at least one selected from the group consisting of a polyethylene resin, a silicone resin, a polyamide resin, a polyimide resin, a polyamide imide resin, an epoxy resin, a phenolic resin, an acrylic resin and a polytetrafluoroethylene.

16. (Withdrawn) A method of manufacturing the dust core according to claim 14, comprising the steps of:

by pressure-forming said plurality of composite magnetic particles, forming a molding;
and

heat-treating said molding at a temperature of not less than 500°C.